

## **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the Application:

### **Listing of Claims:**

Claim 1 (Currently Amended): A method of creating a relational database so that multiple simultaneous hierarchies can be defined without needing dedicated database relationships between objects in the multiple hierarchies, wherein the relational database includes a plurality of objects each having an associated data to be accessed; said method comprising:

forming a first database table having a plurality of entries, each entry representing an object with an associated data to be accessed;

forming a second database table having a plurality of entries, each entry defining a relationship between at least some of said plurality of objects, wherein each entry is associated with at least one of the multiple simultaneous hierarchies;

forming a third database table, said third database table having a plurality of entries, ~~each entry being a summary of said data from a plurality of entries from said second database table~~ a first record representing a first one of the multiple simultaneous hierarchies and a second record representing a second one of the multiple simultaneous hierarchies;

designating a first relationship between a first and second object in the first one of the multiple simultaneous hierarchies; and

designating a second relationship between the first and second objects in a second one of the multiple simultaneous hierarchies.

~~designating a parent-child relationship between a first object and a second object in each entry, wherein the relationship is reversible, so that the first object can be denoted as a parent to the second object in a first entry, and the second object can be denoted as a parent to the first object in a second entry.~~

Claim 2 (Original): The method of claim 1 wherein each of said plurality of relationships is defined between a pair of said objects.

Claim 3 (Cancelled).

Claim 4 (Original): The method of claim 1 wherein said plurality of relationships include single parent and multiple parent hierarchies.

Claim 5 (Previously presented): The method of claim 1 wherein said plurality of relationships include tree type structures.

Claim 6 (Cancelled):

Claim 7 (Original): The method of claim 5 wherein each entry in said second database table defines a relationship between a pair of said objects.

Claim 8 (Original): The method of claim 7 wherein said relationship is between a parent and a child.

Claim 9 (Original): The method of claim 8 wherein each entry in said second database table further defines a direct or indirect parent-child relationship.

Claim 10 (Original): The method of claim 8 wherein each entry in said second database table further comprises a definition of a database structure to which said relationship is a part thereof.

Claims 11 – 20 (Cancelled).

Claim 21 (Currently Amended): A method of creating a relational data structure for storage and retrieval of data having multiple simultaneous hierarchical database relationships without needing dedicated database relationships between objects in the multiple hierarchies, the method comprising:

forming a table of members available in the multiple simultaneous hierarchical database relationships and data to be accessed wherein the data is associated with each member;

forming a table of reporting relationships among the members available in the multiple simultaneous hierarchical database relationships; and

forming a table having a first record representing a first one of the multiple simultaneous hierarchical database relationships and a second record representing a second one of the multiple simultaneous hierarchical database relationships;

designating a first relationship between a first and second member in the first one of the multiple simultaneous hierarchies;

designating a second relationship between the first and second members in a second one of the multiple simultaneous hierarchies ~~a set of hierarchies, each hierarchy summarizing a reporting relationship in said table of reporting relationships; and~~

designating a reversible parent-child relationship between pairs of the members, wherein a first member can be denoted as a parent to a second member, and the second member can be denoted as a parent to the first member.

Claim 22 - 30 (Cancelled).

Claim 31 (Previously Presented) A relational data structure for representing multiple simultaneous hierarchies without needing dedicated database relationships between objects in each of the multiple hierarchies, wherein the relational data structure is based on a plurality of objects, the relational data structure comprising:

a first table for:

organizing a plurality of objects into at least first and second entries, wherein each object is related to at least one other object by a defined relationship;  
storing an object identifier associated with each of the plurality of objects;  
storing associated data to be accessed for each object identifier, ~~wherein the storing is performed regardless of whether the data stored in the first entry is unique with respect to the data stored in the second entry;~~

a second table for:

associating the object identifier of each of the plurality of objects with the object identifier of each related object to represent each defined relationship; and

storing a hierarchy identifier associated with each relationship for indicating that each relationship is associated with a particular one of the multiple simultaneous hierarchies;  
and

a third table for:

~~storing a summary of each of the multiple hierarchies~~  
storing a first record representing a first one of the multiple simultaneous hierarchies and a second record representing a second one of the multiple simultaneous hierarchies,

wherein, a first relationship is designated between a first and second object in the first one of the multiple simultaneous hierarchies and a second relationship is designated between the first and second objects in a second one of the multiple simultaneous hierarchies.

Claim 32-33 (Cancelled).